cated that it would be useful to have a visibility indicator in the cockpit during flight to provide an objective measure of visibility during flight.

As will be appreciated by one of ordinary skill in the art, the present invention may be embodied in its entirety or partially as a computer implemented method, a programmed computer, a data processing system, a signal, and/or computer program. Accordingly, the present invention may take the form of an entirely hardware embodiment, an entirely software embodiment or an embodiment combining software and hardware aspects. Furthermore, the present invention may take the form of a computer program on a computer-usable storage medium having computer-usable program code embodied in the medium. Any suitable computer readable medium may be utilized including hard disks, CD-ROMs, optical storage devices, or other storage devices.

Computer program code for carrying out operations of the present invention may be written in a variety of languages. However, consistent with the invention, the computer program code for carrying out operations of the present invention may also be written in other conventional procedural programming languages.

The present invention as described above with reference to block diagrams and flowchart illustrations of methods, apparatus (or systems) and computer programs in accordance with several embodiments of the invention. It will be understood that blocks of the flowchart illustrations and block diagrams, and combinations of blocks in the flowchart illustrations and block diagrams, can be implemented by computer program instructions (means for performing the contents of the block). These computer program instructions may be provided to a processor of a general purpose computer, special purpose computer, or other programmable data processing apparatus to produce a machine, such that the instructions, which execute via the processor of the computer or other programmable data processing apparatus, create means for implementing the functions specified in the flowchart block or blocks. These computer program instructions may also be stored in a computer-readable memory that can direct a computer or other programmable data processing apparatus to function in a particular manner, such that the instructions stored in the computer-readable memory produce an article of manufacture including instruction means or program code that implements the function specified in the flowchart block or blocks.

The computer program instructions may also be loaded, e.g., transmitted via a carrier wave, to a computer or other programmable data processing apparatus to cause a series of operational steps to be performed on the computer or other programmable apparatus to produce a computer implemented process such that the instructions which execute on the computer or other programmable apparatus provide steps for implementing the functions specified in the flowchart block or blocks.

The exemplary and alternative embodiments described above may be combined in a variety of ways with each other. Furthermore, the steps and number of the various steps illustrated in the Figures may be adjusted from that shown.

As used above "substantially," "generally," and other words of degree are relative modifiers intended to indicate permissible variation from the characteristic so modified. It is not intended to be limited to the absolute value or characteristic which it modifies but rather possessing more of the physical or functional characteristic than its opposite, and preferably, approaching or approximating such a physical or functional characteristic.

The foregoing description describes different components of exemplary embodiments being "connected" to other components. These connections includes physical hardwired connections, wireless connections, magnetic connections, and other types of connections capable of carrying digital and/or analog information between the components.

Although the present invention has been described in terms of particular embodiments, it is not limited to those embodiments. Alternative embodiments, examples, and modifications which would still be encompassed by the invention may be made by those skilled in the art, particularly in light of the foregoing teachings.

Those skilled in the art will appreciate that various adaptations and modifications of the embodiments described above can be configured without departing from the scope and spirit of the invention. Therefore, it is to be understood that, within the scope of the appended claims, the invention may be practiced other than as specifically described herein.

We claim:

1. An airborne visibility indicator system for use in an aircraft comprising:

a LIDAR system; and

a flight crew interface connected to said LIDAR system, said flight crew interface including

a controller connected to said LIDAR system, said controller includes a visibility threshold controller and a beam controller in communication with said LIDAR system, said beam controller includes means for receiving directional information from a flight crew, and

a display interface connected to said LIDAR system and said controller.

2. An airborne visibility indicator system for use in an aircraft comprising:

a LIDAR system, and

a flight crew interface connected to said LIDAR system, said flight crew interface including

a controller connected to said LIDAR system, said controller includes a visibility threshold controller and a beam controller in communication with said LIDAR system, said beam controller includes a horizontal controller and an elevation controller, and

a display interface connected to said LIDAR system and said controller, said display interface is in communication with said visibility threshold controller.

3. The system according to claim **2**, wherein said beam controller includes a compensation processor connected to said horizontal controller and said LIDAR system.

4. The system according to claim **1**, wherein said controller includes a mode switch in communication with said LIDAR system, the mode switch includes at least two positions with one position for continuous operation of said LIDAR system and a second position for manual operation of said LIDAR system by a flight crew.

5. The system according to claim **1**, wherein said display interface includes a visibility display connected to said LIDAR system.

6. An airborne visibility indicator system for use in an aircraft comprising:

a LIDAR system: and

a flight crew interface connected to said LIDAR system, said flight crew interface including

a controller connected to said LIDAR system, said controller includes a visibility threshold controller and a beam controller in communication with said LIDAR system, and